• COLORADO RIVER •

AQUEDUCT NEWS

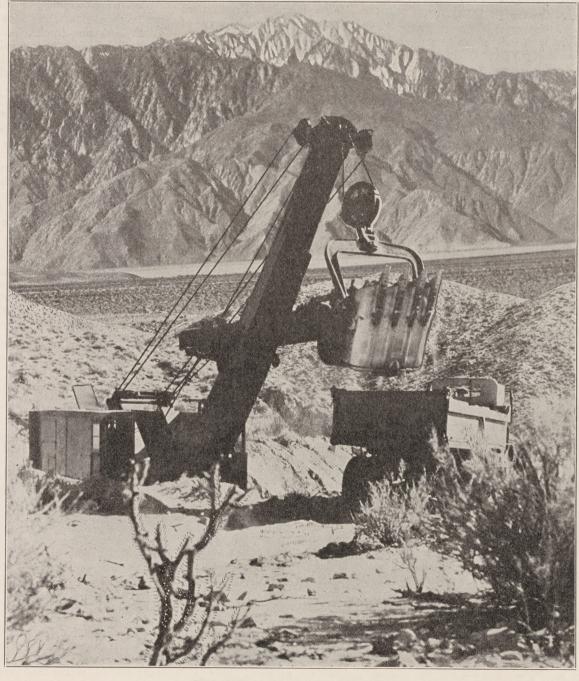
THE METROPOLITAN WATER DISTRICT

OF SOUTHERN CALIFORNIA

Vol. 1

MARCH 20, 1934

No. 5



THE BIG JOB MOVES FORWARD

Excavating the Road to the New District Tunnel Camp in Little Morongo Canyon, With White Crested Mt. San Jacinto in the Background and the Coachella Valley Between



Los Angeles, California

Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

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MORE RACKETEERS

A few weeks ago the AQUEDUCT NEWS brought to the attention of its readers a certain breed of racketeer which has been operating in the cities of the District, preying upon honest men seeking jobs on the project.

Only a shade less despicable is a second breed of the same species which has been discovered in the aqueduct camps—bogus salesmen peddling non-existent or valueless wares.

The following warning, now posted on the camp bulletin boards, has been printed before, but it will bear repetition:

"Solicitors, agents, salesmen, and peddlers are warned not to solicit employees in offices or working places while men are on duty, or to enter bunk houses or mess halls at any time for such purpose. Any person disobeying this rule or found guilty of fraudulent representations to District employees will be restrained from entering the camps."

Enforcement of this rule officially is the responsibility of camp superintendents, but they cannot be everywhere at one time. Every employee, in selfprotection and in protection of his fellow workers, should cooperate in its enforcement by reporting violations.

Let us make the aqueduct camps too hot for the racketeers!

THE PERSONAL TOUCH

Have you a little stranger in your home? Or are wedding bells soon to ring in your vicinity? Or did you win the waltz contest at a recent dance?

These more or less personal questions are a round-about way of informing employees that their publication, the AQUEDUCT NEWS, is interested in something more than engineering and construction facts and figures. The NEWS is ready and anxious to print items on the personal side of the job. There are correspondents in practically every camp. Keep them busy—or if you can't locate your correspondent, send in the item yourself.

GENERAL MANAGER REVIEWS ACTIVITIES OF MONTH ON AQUEDUCT

(Editor's Note: The following is a brief summary of the monthly report of General Manager and Chief Engineer Weymouth, filed with the Board of Directors in March, covering work during February. These summaries are presented at regular intervals.)

Legal Division—Regular work was continued on legal matters involving the District. An order was made by the Industrial Accident Commission approving the Berdoo Hospital. Preparations are under way for the delivery of Interim Certificate No. 10 to the Reconstruction Finance Corporation, pursuant to sale made January 19, 1934. The amount involved is \$2,016,000 and accrued interest.

Field Engineering Division - Good progress was made on surveys for the Black Canyon transmission line, the estimated average completion, exclusive of the staking, being 63 per cent at the end of the month. Rules governing "Surface Organization and Procedure at Tunnel Fires and other Major Emergencies" were completed and forwarded to all contractors and force account units, and to all division engineers and key men who might be called into service in case of emergency. Regulations also have been compiled and are being distributed among those concerned on the subject of "Regulations Governing Tunnel Blasting Equipment, Practices, and During the month two hundred Rules." and twenty men at the Coachella camps were given first-aid training and award-

in the mine rescue squads.

Construction Division—(See progress

ed U. S. Bureau of Mines certificates,

and seven were trained to fill vacancies

table on Page 6.)

Office Engineering, Civil - Studies and tests were completed of the straight gravity section model of Parker Dam, and a revised arch dam model with modifications in shape of crest and revised gate spacing was erected and tested with very satisfactory results. Plans for protecting the canal sections of the aqueduct from storm water runoff were reviewed and some modifications suggested. Considerable time was spent on water supply studies in connection with the Parker Dam power studies. Investigations of the feasibility of a District plant for the manufacture of cement for the construction of the aqueduct were continued, this work consisting of further investigations of proposed lime rock deposits, preliminary estimates of cost of producing cement in a District plant,

and comments on reports and communications received.

Electrical Engineering Division-Studies were continued on the design of the transmission line between Gene Wash and the Intake, involving the comparison of high or low voltage transmission for this portion of the line. Studies were continued on the stability of the main transmission line and its relation to the characteristics of the pump motors. A conference was held with representatives of the Los Angeles Bureau of Power and Light, the Southern California Edison Company, and the Southern Sierras Power Company, and an agreement reached on the proposed switch rack location at Boulder Dam, and as a result of which coordinated studies were submitted to the Bureau of Reclamation.

Miscellaneous Activities Division—In supplying labor for force account work, the labor employment office made its selection from cities under their quotas, except in cases where qualified men in certain classifications were not available in such cities.

Right of Way Division — Regular work was continued on the securing of aqueduct rights of way.

Personnel Division — Sixty-nine new applications were approved and placed in the active file. One thousand three hundred and fifteen applicants were interviewed. The January labor turnover for all District forces was 5.72 per cent, which shows a continued decrease compared with previous months.

Purchasing Division — During February a total of 824 purchase orders were issued covering purchases amounting to approximately \$134,655, exclusive of subpurchase orders. Ninety-seven subpurchase orders were issued amounting to approximately \$2,232.

Accounting and Costkeeping Division—Actual costs to February 28, 1934, amounted to \$14,788,071.07, covering portions of works and activities, the total cost of which is estimated at \$60,429,472.

MATERIALS SHIPPED IN FOR LITTLE MORONGO SIPHON CONSTRUCTION

Little Morongo and Fan Hill siphons, first to be constructed on the aqueduct, still are attracting attention along the line, as steady progress is reported on both jobs.

At little Morongo the contractor, the American Concrete and Steel Pipe Company, has completed the grading of the pipe yard for the manufacture of the precast pipe. A water line is being laid from the Little Morongo water line to this yard.

Cores Arrive

A test has been made with the Link-Belt shovel on rock excavation at the west side of the siphon location, and approximately 200 cubic yards were removed. Further excavation will be made at a later date.

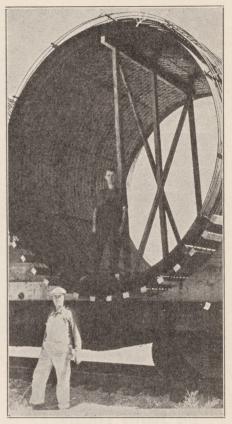
Three cars of joint assemblies arrived at Garnet, and are being moved onto the job. The accompanying pictures show the arrival at Garnet of the first shipment of the bar cage reinforcing assemblies, which are to form the cores of the concrete pipe sections. Each completed section will weigh forty tons.

At the site of the work the contractor has erected a frame office building and two tents to house the men now on the job.

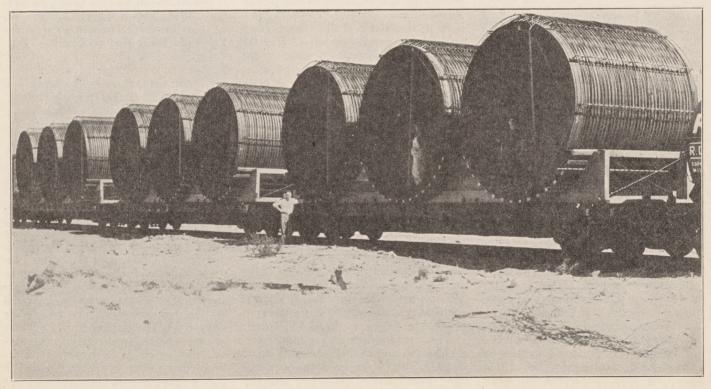
Meanwhile at Fan Hill, where District forces are constructing the monolithic siphon, the addition of a large pugmill type of agitator has improved greatly the efficiency of the pumpcrete plant. Concrete buggies are now being used with adjustable pipes in placing the concrete in the conduit arch section at this location, instead of the spout system previously in operation.

Five Instruments

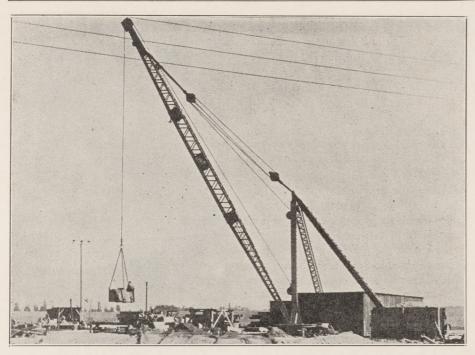
Five instruments were set in the conduit invert before the pour of March 5. These included gauge points for measuring the elastic deformations and settlement of points on the surface of the invert, strain meters for measuring the stresses at critical points, joint meters to indicate the amount of opening that may occur in the joint between the arch and invert, thermocouples for temperature measurements, and pressure gauges to determine the loads on the sub-grade.



An idea of the large size the twelve-foot aqueduct siphons may be gained by comparison with the men in the picture above. When full capacity of the aqueduct is needed, a second barrel of equal size will be used.



The First Cores for the Precast Siphon in Little Morongo Canyon Arrive at Garnet for Transshipment by Truck to the Job



Stiff-legged Crane in Operation at No. 1 Shaft on Valverde Tunnel

Fargo Safety Club To Hold Dance March 27

Final arrangements are being completed for the second dance of the Fargo Safety Club, to be held in the camp commissary on the night of Tuesday, March 27.

The newly organized camp orchestra will furnish the music for the dancers, and special lighting effects are being arranged. A feature of the evening, it is announced by the committee, will be a Safety Club Flag raising ceremony at the camp flag pole.

Oldest Aqueduct in World Is Subject of Study

Of interest to workers on the great modern Colorado River Aqueduct are news reports of continued study of one of the most ancient water systems in the world—built in the seventh century before Christ and discovered last year by the University of Chicago's Oriental Institute expedition in Irak.

Constructed by Sennacherib, king of the Assyrians, it was used to carry water for 30 miles to his famed gardens at Ninevah and to irrigate the earliest known cotton plants, which he termed "wool-bearing trees."

Valverde Shaft Has Unique Hoisting Equipment

Shaft No. 1 on seven-mile Valverde tunnel continued last week to be a point of interest on the Colorado River Aqueduct project as the only shaft along the line where hoisting is done with a stiff-legged crane.

A comparatively shallow hole, being only 64 feet deep, the shaft permits the use of this equipment in place of the head frame and hoist utilized at other points along the aqueduct.

Most westerly of all the tunnels on the project, the Valverde bore is being driven by the Dravo Contracting Company. H. C. Richardson is general superintendent on the job and Dean Luther, J. R. Glaeser, and Fred Youmans are tunnel superintendents.

At the present time the tunnel is being excavated in two directions from each of three shafts. From No. 1 shaft 1,275 feet will be driven east and 3,462 feet west. From No. 2 shaft, a 204 foot hole, 3,463 feet will be driven east and 6,175 feet west. Excavation from No. 3 shaft, 192 feet deep, will be 6,175 feet east and 5,975 feet west. A fourth shaft is contemplated. From it 5,975 feet of tunnel will be driven east and 4,650 west.

The contract price of the tunnel was \$3,136,603, and award was made April 7, 1933. When completed, the bore will open into Cajalco Reservoir, terminal storage basin of the main aqueduct line.

Safety On the Aqueduct

By T. W. OSGOOD Safety Engineer

A friend, in jesting Abraham Lincoln regarding his long legs, asked: "Abe, how long do you think a man's legs should be?" Abe's answer was: "If a man's legs are long enough to reach from his body to the ground, I believe that they are of the proper length."

This suggests the thought that if a man's mental attitude towards safety is long enough to reach from the hazard to the remedy, it is of the proper length to prevent accidents.

In addition to other very commendable safety records on the aqueduct, there are certain splendid accomplishments in accident prevention which are notable.

Since the advent of the Coachella safety flag, Wide Canyon Camp (Ross L. Bryant, Superintendent) won the flag four consecutive months as the result of its excellent safety records during the months of September, October, November, and December, 1933, a total of 129,512 man hours worked.

During the month of December, 1933, Thousand Palms Camp (D. L. Reaburn, Superintendent) worked 34,001 man hours without a lost-time injury.

On its record for the month of January, 1934, Yellow Canyon Camp (W. L. Taylor, Superintendent) won the flag from Wide Canyon Camp.

On the construction of the East portion of the West Eagle Mountain Tunnel, being carried on by Broderick and Gordon (F. E. Stokes, Superintendent) 15,458 man hours were worked during the month of January, 1934, without a single man losing time from injury.

single man losing time from injury.
Up at Hayfield Tunnel No. 2, Shofner and Gordon (H. E. Warden, General Superintendent) operated the month of February, 1934, without a man of the crew sustaining a lost-time accident.

Fargo Camp (J. H. Manwaring, Superintendent) flies the Coachella safety flag for having worked the month of February, 1934, with the lowest lost-time accident frequency of any camp in that division. This was a close race among three of the camps as indicated by the frequencies: Fargo 64, Wide Canyon 70, Thousand Palms 75. These are outstanding low frequencies for tunnel construction, as the average for California tunnels for a five year period is 151. Following with good records are: Yellow Canyon 153, and Berdoo 155.

DIRECTORY

BOARD OF DIRECTORS

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. D. 11. 1 IIIIC	y, Decretary
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Beverly Hills	George R. Barker
	J. L. Norwood
Compton	William H. Foster
Fullerton	Walter Humphreys
Glendale	Frank P. Taggart
Long Beach	William M. Cook
Los Angeles	I. Eisner
Los Angeles	Perry H. Greer
Los Angeles	Walter A. Ham
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Los Angeles	John R. Richards
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Santa Monica	Arthur A. Weber
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(1)1 TT III	-11 M

Charles H. Toll, Treasurer D. W. Pontius, Controller

GENERAL STAFF

General Manager and Chief Engineer F. E. Weymouth
Asst. General ManagerJ. L. Burkholder Asst. Chief EngineerJulian Hinds
General CounselJames H. Howard Asst. ControllerJ. M. Luney
General SuperintendentJames Munn Chief Elec. EngineerJ. M. Gaylord
Construction EngineerJ. B. Bond Asst. to Gen. MgrDon J. Kinsey

DIVISION ENGINEERS

Division 1	R. C. Booth
Divisions 2 and	3John Stearns
Division 4	R. B. Diemer
	6B. C. Leadbetter

SUPERINTENDENTS

Colorado River, Copper Basin and Whipple Mt. Tunnels, Walsh Construction Co., F. T. Huntington, Gen. Supt.; W. A. Huntington and E. A. Hatch, Tunnel Supts. Coxcomb Tunnel and Iron Mt. shaft, Winston Bros., E. A. Bernard, Gen. Supt.; F. T. Hillman and R. B. Johnson, Tunnel Supts.

Iron Mt. Tunnel, West Portal, Utah Constr. Co., Ben Arp, Gen. Supt. East Eagle Mt. Tunnel and West Eagle

Mt. Tunnel, east portion, Broderick & Gordon, F. E. Stokes, Gen. Supt. West Eagle Mt. Tunnel, west portion, L. E. Dixon and Bent Bros., P. C. Guinn,

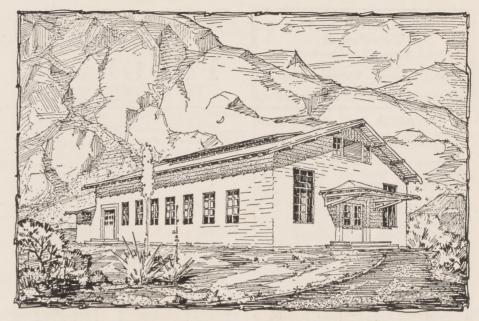
Gen. Supt.
Hayfield Tunnel No. 1, Hunkin & Conkey
Constr. Co., G. B. Hoag, Gen. Supt.; F.
Backlund, Tunnel Supt.
Hayfield Tunnel No. 2, Shofner & Gordon, H. E. Warden, Gen. Supt.
Cottonwood Tunnel, J. F. Shea Co., Inc.,
J. F. Shea, Gen. Mgr.; Joe Bonner and
Carl Nelson, Tunnel Supts.
Mecca Pass Tunnels, Morrison-Knudsen,
S. A. Dahlberg, Gen. Supt.; C. A. Griffen,
Asst. Supt.

Asst. Supt. Coachella Division, R. M. Merriman,

Division Supt.
Yellow Canyon Adit, E. Coachella Tunnel—

Yellow Canyon Adit, E. Coachella Tunnel—
District Force Account.....W. L. Taylor
Fargo Adit, East Coachella Tunnel—
District Force Account.....J. H. Manwaring
Berdoo Adit, East Coachella Tunnel—
District Force Account.......F. A. Weller
Fushawalla Adit, East Coachella Tunnel—
District Force Account.....C. J. Kavanagh
Thousand Palms—
District Force Account.....D. L. Reaburn
Wide Canyon—

Wide Canyon-



Artist's Sketch of the Coachella Division Recreation Hall, Drawn from Revised Plans

Final Plans Made For Library Party

That the evening of March 31 will be a memorable one for aqueduct employees is indicated by plans being completed by the labor office staff for the Bring-a-Book Party at Echo Park Community House, 1632 Bellevue Avenue, Los Angeles.

Festivities are scheduled to begin at 8:00 P. M., continuing until midnight. Auction and contract bridge and bunco will be played. Dancing is to be enjoyed later in the evening.

Admission will be thirty-five cents and one book, new or used. It is requested that persons desiring to attend make reservations with the labor office, stating the number of tables desired and which game is preferred.

The committee calls attention to the fact that the Community house may be reached on both the red and yellow cars from almost any point in the city. All employees are invited to come and bring their friends.

Despite the fact that the following day is April Fool's Day, the labor office staff guarantees that the refreshments will be neither peppered or rubber. They will be simple, however, since money from the sale of tickets is to help build up the libraries in the camps.

Suggestions offered by the committee as to where and how to find books include a search of closets, trunks, and garages, solicitation among friends.

Coachella Division Recreation Hall Started

Materials have been delivered for the new Coachella Division recreation hall at Berdoo Camp, and work on the structure is scheduled to begin at once.

Although original tentative arrangements were to locate the building at Pushawalla, revised plans call for its erection at Berdoo.

Overall dimensions of the structure will be 39 feet by 72 feet. The auditorium inside will be 38 feet by 60 feet. with a 12 by 24 foot stage at one end. The stage is to be so constructed that a 12 foot portable section may be added to it, forming a boxing ring 24 feet by 24 feet.

Space is being provided for a 10 by 14 foot screen for motion pictures. The films will be projected from a fireproof booth at the opposite end of the building. The booth is to be suspended at sufficient height to permit projection over the heads of the audience. This is allowed by a special scissors type of roof truss that eliminates pillars.

Specifications call for a hard edge grain pine floor, suitable for dancing. A well lighted interior is assured by numerous windows. Plans provide for a continuous roof ventilator, 36 feet long and opening on both sides of the ridge. The exterior design of the building will be in harmony with other camp structures .

BEST PROGRESS This Period

Rock Tunnels: Coxcomb East 668 ft. Gravel Tunnels: Whitewater No. 2 757 ft. Tunnel Excavated to Date-16.84 mi.

TUNNEL PROGRESS

FEB. 16 to MARCH 15, 1934

BEST WEEK'S RECORD This Year

Rock Tunnels: Yellow Canyon East 196 ft. Gravel Tunnels: Whitewater No. 2 201 ft.

									-	-	
TUNNELS Length in feet	Length	Number of Shifts	EXCAVATION PROGRESS IN FEET		OGRESS	TUNNELS	Length	Number	EXCAVATION PROGRESS IN FEET		
	in feet		Average Per Shift	This Period	Total to date	CONTRACT	in feet	of Shifts	Average Per Shift	This Period	Total to date
Walsh Constr. Co. COLORADO RIVER West Portal COPPER BASIN, No. 1 West Portal	(5640) 5640 (757)				0	J. F. Shea Co. COTTONWOOD East Portal West Portal	(20105) 10114 9991	72 78	9.0 8.6	646 667	3664 3686
COPPER BASIN, No. 2 East from adit Adit West from adit WHIPPLE MT.	757 (11,580) 1878 330 9702 (32,265)	84	6.6	557 0 547	0 1763 330 1734	Morrison-Knudsen MECCA PASS No. 1 No. 2 No. 3	(5900) 325 970 4605	72	7.9	566	0 0 2338
East from adit Adit West from adit	18,352 924 13,913	84	7.0	593 0 575	1679 924 1565	West Constr. Co. WHITEWATER No. 1, West Portal No. 2, East Portal	(10206) 2060 8146	8	4.3	34	34
Winston Bros. IRON MT. East from shaft Shaft West from shaft	(39,805) 9890 165 13,743	75 75	2.7	203 0 647	614 165 2126	Wenzel & Henoch SAN JACINTO East from Cabazon Cabazon shaft	(67,415) 8553 246	42	2.0	87 0	142 246
Utah Constr. Co. IRON MT. West Portal	16,172	84	6.1	511	4814	Cross drift West from Cabazon East from Potrero Potrero shaft	935 22839 20589 796	84	2.8	0 236 0 90	935 313 0 735
Winston Bros. COXCOMB East Portal	(17,795) 8765	75	8.9	668	3302	West from Potrero West Portal Hamilton & Gleason	6712 87 22	84	1.2	0 104	998
West Portal Broderick & Gordon EAST EAGLE MT. West Portal	9030 (9460) 9460			0	0	BERNASCONI East Portal Dravo Contr. Co.	(6220) 6220	52	6.5	336	2504
WEST EAGLE MT. East from adit Adit West from adit	(26,503) 7880 2008 7974	72	4.2	297 0 316	326 2008 331	VALVERDE East from Shaft 1 Shaft 1 West from Shaft 1	(37,150) 1275 64 1525	75 75	5.0	376 0 236	648 64 460
Dixon & Bent WEST EAGLE MT. West Portal	10,649	75	8.5	637	2737	East from Shaft 2 Shaft 2 West from Shaft 2 East from Shaft 3	5400 204 5400 6950	75 75 75	5.9 6.3	440 0 472	2284 204 2225
Hunkin & Conkey HAYFIELD, No. 1 East from adit Adit West from adit	(9677) 5317 511 4360	48	5.2	250. 0 246	692 511 252	Shaft 3 West from Shaft 3 East from Shaft 4 Shaft 4 West from Shaft 4	192 6950 5000 — 4650	75	2.4	499 0 181	2025 192 2056
Shofner & Gordon HAYFIELD, No. 2 West Portal	(5375) 5375	48	6.5	313	1563	Total Excav. Contract Tunnel exclusive of Adits and Shafts (In Miles)	305,853 57.93	2106	5.70	11,997 2.27	50,516 9.57
			Т	UNNEL	S ON FO	RCE ACCOUNT					
EAST COACHELLA TUNNEL Yellow Canyon Adit East from Adit West from Adit	(96,460) 686 10,204 10,076	72 72	9.0 7.4	0 649 533	686 3860 3117	WEST COACHELLA TUNNELS 1000 Palms No. 1, W. Portal No. 2, E. Portal No. 2, W. Portal	15,043 3798 40	78 72	3.0 6.9	234 495 0	3738 3748 26
Fargo Canyon Adit East from Adit West from Adit	891 11,850 15,200	72 72	6.5 7.0	0 471 506	891 3106 3146	Wide Canyon No. 1, E. Portal No. 1, W. Portal No. 2 Tunnel	5122 9183 848	72	7.2	0 517 0	36 3255 848
Berdoo Canyon Adit East from Adit West from Adit	2042 15,824 12,456	72 72	9.0 6.2	0 645 446	2042 3575 3635	7 Palms E. Portion Total excav. Force Acct. Tunnels	8390	72	7.4	533	2938
Pushawalla Canyon Adit East from Adit West from Adit	10,186	72 72	5.3	0 383 546	2935 1589 1760	excl. of Adits and Shafts (In Miles) *Total Tunnel Excavation	138,884 26.30 84.23	870	6.85	5958 1.13 3.40	38,377 7.27 16.84

^{*} Does not include Schedules 7 and 8 of the West Coachella Tunnels. Heading excavation is counted as two-thirds of full tunnel excavation.

NEWS FROM FIELD AND OFFICE

Unfortunately because of mechanical restrictions, the NEWS is unable to give its readers details of the Aqueduct Miners' Celebration held at Indio last Saturday. The event occurred too late to be reported in this issue, but a full story and pictures are promised for the April 5 edition.

A. B. Woodward of Berdoo is open for congratulations these days. On Sunday, March 11, the stork made a happy landing at the Woodward home in Long Beach and left a 10 pound baby girl.

By the time the AQUEDUCT NEWS reaches its readers this time, Thousand Palms Tunnel No. 2 will have been holed through, unless unforseen difficulties are encountered, according to Superintendent Reaburn. This will be the second aqueduct tunnel to be completed, Wide Canyon Tunnel No. 2 having been holed through on October 3. The Thousand Palms bore is 3,838 feet in length.

The narrow road, leading from the bottom of Gene Wash to the west portal of Colorado River tunnel, has been completed, it is reported by Division Engineer Booth. The approach cut is 90 per cent excavated, and excavation for the compressor plant and shop has been completed by the Walsh Construction Company, contractors on the job.

Interested visitors at the Fan Hill siphon job on the Coachella Division recently were William Mulholland, builder of the Los Angeles Aqueduct and famed as a pioneer in Colorado River development, H. A. Van Norman, general manager and chief engineer of the Los Angeles Water Bureau, and H. L. Jacques, engineer of construction for the Water Bureau.

Berdoo Camp has been the center of attraction for a large number of delegations lately. Prominent among those recently visiting are the Kiwanians from Banning, J. L. Norwood, director from Burbank, and Walter Humphreys, director from Fullerton. Among others were various officials of the contractors' camps along the line.

Flying during March for the best camp records for safety, progress, and economy on the Coachella Division in February were:

Safety Flag—Fargo Camp.
Economy Flag—Yellow Camp.

Progress Flag—Yellow Camp.

Congratulations, Fargo and Yellow!

Division No. 3 reports that Floyd Stokes, superintendent for Broderick & Gordon at Eagle Mountain has returned to the job after a 10-day sojourn in the hospital.

Employees all along the aqueduct line will be glad to know that Construction Engineer Bond, in Good Samaritan Hospital, is making rapid progress toward full recovery.

And this, ladies and gentlemen, is none other than H. J. King, Hamilton & Gleason's superintendent on Bernasconi tunnel. He is famed far and wide in construction circles as the inventor of the King Grasshopper. The object protruding from his breast pocket, according to Mr. King, is a cigar. Friends who have sniffed the aroma of other similar objects assert, however, that it is a stick of dynamite.

Plans are being completed, it is understood, for the taking up of a collection at Berdoo Camp to finance the purchase of a brand new pair of tin snips for Frank Laird. This development is a sequel to the sad, sad story of the grievous loss he suffered not long ago when he espied, lying stark and still on the aqueduct road near Pushawalla, a long eared (and long legged) jack rab-bit which had fallen victim to man's motorized march across the desert. Knowing the potency of rabbits' nether extremities in poker games and such, Frank turned back to Pushawalla and borrowed there a trusty pair of tin snips with which to perform an amputation. But alas, when he returned to the bunny's corpse some ruthless vandal, with no consideration for prior claims, had performed an operation on the sad remains—the furry paws were gone!

Tunnel men at Valverde No. 1 shaft are back to normalcy these days as a result of the completion of their new change house. The new structure replaces the one which went up in smoke last month when fire broke out from an overheated oil stove. The work was done by the Threlkheld Commissaries, Inc.

Large scale topography being taken by Division No. 3 engineers at Iron Mountain, Eagle Mountain, and Hayfield pump lifts has been completed and topographic sheets forwarded to the Banning office. One four-man party, however, is still employed in completing some miscellaneous topography required on the first siphon west of Eagle Mountain and the first siphon east of Hayfield pump lift.

Members of the California Fish and Game Commission have asked the Metropolitan Water District to study the possibility of constructing small siphons along the aqueduct as a means of furnishing water for quail and other desert game birds. A closed area, or game sanctuary, would be declared on each side of the aqueduct for a distance of one-half mile for the project's entire length.



Early Start On Dam At Parker **Expected**

That actual construction of Parker Dam, a part of the Colorado River Aqueduct's intake works on the Colorado River, will be set under way at an early date through funds advanced by the Public Works Administration is revealed in negotiations being completed by the Administration and the Metropolitan Water District.

Howard In Washington
General Counsel James H. Howard
of the District arrived in Washington recently with contracts and other documents stipulating the basis upon which the District is to sell approximately \$2,000,000 in bonds to the Public Works Administration, and other phases of the contracts under which the dam is to be built. Action has been taken by the Metropolitan Water District's board of directors, it was announced, approving these contracts and negotiations, and forwarding them to Washington for the completion of final arrangements.

Near Parker

Under the terms of these contracts, the Public Works Administration has agreed to release \$2,000,000 to finance the launching of construction work on Parker Dam, the total cost of which is estimated at approximately \$13,000,000. Parker Dam, on the Colorado River, will be situated about twenty miles above the town of Parker, Arizona, and about 150 miles below Boulder Dam.

Tunnel Equipment Purchased By District

Evidence of the increased tunnel driving program on the Coachella Division of the aqueduct is the purchase, authorized at recent meetings of the District's board of directors, of \$124,265 worth of equipment to be used in the work.

The items purchased include four centrifugal compressors from the Smith Booth Usher Company at a total delivered price of \$7,695; two motor generator sets from the Westinghouse Electric Manufacturing Company at a total delivered price of \$3,190, and six Conway mucking machines from the Goodwin Manufacturing Company at a total price of \$42,900, f.o.b. Chicago.

50 Dump Cars

In addition, the District bought fifty western type, five cubic yard capacity, dump cars from the Koeppel Industrial Car and Equipment Company. The price was \$22,500, f.o.b. Koeppel, Penn. Purchased from the same concern were sixteen flat car trucks for \$2,800, f.o.b. Koeppel. Six eight-ton battery locomotives were ordered from the Atlas Car and Manufacturing Company for \$45,180, f.o.b. Cleveland.

The tunnels on which the new equipment will be used are Blind Canyon tunnel, the west portion of Seven Palms tunnel, Morongo tunnels Nos. 1 and 2, and Long Canyon tunnel.

All of these bores are to be driven by forces employed directly by the Water District.



The Aqueduct's Little Country School-at Iron Mountain

Long Division Being Learned at Iron Mt.

Tunnel driving isn't the only thing they are doing these days out at the West Iron Mountain camp of the Utah Construction Company. Other activities include learning the multiplication tables, memorizing such dates as 1776, 1492, and 1066, and probing into the mysteries of long division.

All of the camp's personnel is not thus engaged, however. Just seven membersthe seven youngest, who are attending the only school along the aqueduct line, presided over by Miss Alice McChesney, a recent graduate from U. C. L. A.

The student body includes Elizabeth Horrigan, Billy Ketron, Fred Jarrett, Stanley Jarrett, Curtis Ketron, Betty Gutcher, and Floyd Brossard.

In only one essential detail does the school differ from the old country school, famed in song and story. Instead of being red in color it is coated with aluminum paint to reflect the rays of the sun, and thus maintain a lower temperature.